

Classifying the Colleges of the Forgotten Americans:

A Geographically-Based Classification of Public Master's Colleges and Universities

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Abstract

At the 2009 meeting of the Association for the Study of Higher Education's Council on Public Policy in Higher Education, Pat Callan, President of the National Center for Public Policy and Higher Education, asserted that Master's Colleges and Universities (MCUs) are the most understudied sector of American higher education. This paper described how the 265 public MCUs, which in 2006-7 served 2.5 million students, are for the first time geographically classified in a manner consistent with the 2005 Basic Classification of Associate's Colleges published by the Carnegie Foundation for the Advancement of Teaching. Carnegie's 2005 edition, the first to classify Associate's Colleges, created urban, suburban, and rural sub-classifications that reflect the importance of place in the assignment by states of community college service delivery areas. The proposed public MCU classification is applied using National Center for Education Statistics data on enrollments, institutions, and student financial aid. This is followed by a brief discussion on the use of this geographically-based classification of public MCUs to bring greater precision to postsecondary research, policy, and practice.

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Introduction

In his first address to a Joint Session of Congress in February 2009, President Barack Obama committed the nation to dramatically expanding adult baccalaureate degree attainment among U. S. adults, which had fallen from first to eighth among developed nations around the world (Obama, 2009). In this speech President Obama asserted:

That is why, at the start of my administration I set a goal for America: by 2020, this nation will once again have the highest proportion of college graduates in the world...Today, I am announcing the most significant down payment yet on reaching this goal in the next ten years. It's called the American Graduation Initiative. It will reform and strengthen community colleges from coast to coast so that they get the resources students and schools need – and the results workers and businesses demand. Through this plan, we seek to help an additional five million Americans earn degrees and certificates in the next decade.

The task of dramatically increasing adult baccalaureate degree attainment requires a substantially greater policy focus on what National Center for Public Policy Center and Higher Education President Pat Callan termed the most understudied sector of US higher education, the nation's public regional universities (2009 unpublished remarks to the Council for the Public Policy of ASHE). Reasons for this include, first, that many of our nation's public flagship universities, including the Universities of California, Illinois, Minnesota, and Texas all capped their enrollments at the end of or shortly after the "baby boom" that spanned the period 1965 to 1973. When asked to respond to the item, "Public flagship universities in my state have capped enrollments" 12 of the responding 50 state community college directors strongly agreed or agreed, including all five of the largest states--California, Texas, New York, Florida, and Illinois (Katsinas & Tollefson, 2009). The largest baby boom since the mid-1960s—what the late Clark Kerr in 1994 termed "Tidal Wave II" is presently of college age (Kerr, 1994). Between 2009

and 2012, there will be one million more persons between the ages of 18 and 24 years of age, and 3 million more young adults between the ages of 25 and 34 in the American population than there were in 2009. As Katsinas and DeMonBrun (2011) note, the dramatically higher numbers of college-age students will occur whether or not our institutions of higher education are funded to serve them. Third, state tax appropriations for public higher education have not grown to accommodate the record growth in high school class size in many states. In fact, 34 of 46 responding states reported mid-year budget cuts in FY2003, and 34 of 48 responding states reported mid-year budget cuts in state tax appropriations for public higher education in FY2009-2010 (Katsinas & Friedel, 2010). Fourth, as the Delta Cost Project notes, to compensate for cuts in state operating budgets from 1998 to 2008, significant cost-shifting has occurred, as institutional boards and leaders have chosen not to cut spending (and thus dramatically change their missions and educational functions), and instead have chosen to shift their revenue sources from state taxes to tuition (Desrochers, Lenihan, & Wellman, 2010). We believe that the combined demographic challenge of all-time record enrollments and public flagship university enrollment caps will likely push even more students to the nation's nonselective public Associate's Colleges and Master's Colleges and Universities. This underscores the need for new policy tools—in this case, one to geographically classify public MCUs in a manner consistent with the new Carnegie Basic Classification of Associate's Colleges—to bring greater precision to research across the two sectors of American higher education with a primary access mission.

This paper is organized as follows: First, a brief literature review on the public master's colleges and universities is presented. This is followed by short sections describing how Carnegie currently classifies public MCUs as part of its 2005 Basic Classification, and the geographic classification by Carnegie of the public Associate's Colleges sector. The proposed

sub-classification of public Master's Colleges and Universities, in a manner consistent with that used for Carnegie Associate's Colleges sector is then presented, with examples of how this research tool can be used to tease out differences by geographic type of rural, suburban, and urban MCUs. Federal data from the National Center for Education Statistics' Integrated Postsecondary Education Data System for enrollments and student financial aid are then analyzed to show how this theoretical framework classifying public MCUs can be used to assist higher education scholars and policymakers in their efforts to better understand the role both sectors play in delivering on the promise of access.

The Most Understudied Sector of Higher Education

The literature on public Master's Colleges and Universities is relatively small. Most public MCUs can trace their historical roots to the teachers colleges and normal schools that broadened their missions following World War II to the end of the Baby Boom, a period that began with the GI Bill enrollment boom through the mid-1970s. This is the era of the "great transformation" of higher education, when total US enrollments grew from about 2.3 million students in 1950 to about 3.5 million students in 1960, to 11.5 million students in 1980. The late Clark Kerr called this "the golden age," a time when the first mass system of universal higher education of any industrialized country emerged (Kerr, 1991). Today, many of these institutions still emphasize a key component of their service mission: preparing teachers for the regions their colleges serve (Kinkead, 2009).

Just one book-length treatment of these institutions can be identified: *Colleges of the Forgotten Americans: A Profile of State Colleges and Regional Universities*, by E. Alden Dunham (1969). This was the second book in the institutional profiles series sponsored by the Carnegie Commission on Higher Education chaired by Clark Kerr. To learn how Dunham's

study was conducted, in 2009 Kinkead interviewed Allan W. Ostar, who served as President of the American Association of State Colleges and Universities (AASCU) from 1965 to 1991, and Fred Harclerode, founding president of California State University-Hayward, and former President of the American College Testing Service. Both talked of how they guided Dunham, who had little prior familiarity with these institutions, regarding which of the 14 AASCU colleges he should visit (the book begins with vignettes of what is now Emporia State University in Kansas, State University of New York at Brockport, and Western Michigan University), and what he should look for as he conducted his field work in the late spring of 1968 (these 14 institutions are listed in Dunham, 1969, pp. xii-xiii).

In particular, Ostar and Harclerode strongly encouraged Dunham to discuss the highly similar access mission and emphasis on serving first-time-in-college, first-generation students they believed that both community colleges and public regional universities shared. This point would be made in subsequent AASCU documents, and can also be observed by the emphasis both AASCU and the American Association of Community Colleges have placed on lobbying for increased Pell Grant funding. Dunham would suggest the enrollment profiles of community colleges and state colleges and universities were remarkably similar in serving large numbers of first generation, low income, and minority students working their way through college, and that “upper-division enrollments in large numbers of state colleges consist increasingly of junior college transfer students” (p. 94). Many state colleges graduate almost as many transfer students as their own freshmen, as AASCU institutions and community colleges “share a similar philosophy, and serve a similar clientele” (Ostar, 1991, p. 23). If the two institutional types share similar student profiles, it is entirely reasonable the two institutional types might also share a

similar Carnegie-style classification scheme, a point reinforced by Kinkead's (2009) discovery that 94%, or 250 of the 266 publicly-controlled MCUs--are AASCU members.

How Carnegie classifies public Master's Colleges and Universities

In the Carnegie Foundation's 2005 Basic Classification, Master's Colleges and Universities (MCUs) were assigned on the predominance of master's degrees as their highest level of degree awarded (CFAT, 2010). Past editions of the Basic Classification in 1973, 1976, and 1987 used a different term—"Comprehensive Colleges and Universities." Ostar specifically recalls that when officials from Clark Kerr's Carnegie Commission on Policy Studies in Higher Education called in the early 1970s asking for advice, he suggested "comprehensive colleges and universities" and not the term "regional universities" Dunham used in his 1969 book. Ostar justified "comprehensive colleges and universities" on the basis that these institutions had broadly assigned missions to serve the regions in which they were situated (Ostar, personal interview). This notion of comprehensive service to region continues to this day, demonstrated by AASCU's ongoing Stewardship of Place Initiative (AASCU, 2002).

Table 1 shows the 2000 and 2005 Carnegie Basic Classification of Institutions of Higher Education. According to the Carnegie Foundation, the 2005 Basic Classification represented the largest overhaul of the classifications since their initial publication in 1973. As Table 1 shows, a third category within the doctoral sub-classifications was added; most important is the change in the Associate's Colleges sector, which in each of the prior editions of the Basic Classification in 1973, 1976, 1987, 1994, and 2000 had but a single sub-classification for what constituted roughly 40% of all institutions. The 2005 Basic Classification divided Associate's Colleges into public, private not-for-profit, and for-profit institutions, with 11 sub-classifications for the publics, and two each for the private institutional types. Within the 11 public sub-classifications,

there are four “other” types—Associate’s Public Special Use, Associate’s Public 2-Year Under Universities, Associate’s Public Primarily Associate’s, and Baccalaureate Associate’s Colleges (at which Bachelor’s degrees do not exceed 5% of total degrees awarded). Together, these four types serve roughly 6% of the total public ACs student enrollments (Hardy & Katsinas, 2007).

INSERT TABLE 1 ABOUT HERE

We now turn to the 656 public, private, and for-profit Master’s Colleges and Universities in the 2005 Carnegie Basic Classification operating within the boundaries of the United States and its territories. These 656 institutions served a total of 3,887,786 undergraduate students in the fall of 2004. By type of control, the 266 public MCUs served 2,411,305 undergraduates or 62% of nearly 4 million enrolled in this sector; the 345 private not-for-profit institutions served 1,290,716 or 33%, and the 45 private for-profit institutions served 185,765 students or 5% of the total enrollment (Carnegie Foundation for the Advancement of Teaching, 2006).

Carnegie used the numerical thresholds of the highest degrees awarded to assign institutions to the general Master’s Colleges and Universities category, and then the numbers of master’s degrees awarded to assign institutions to its MCU sub-classifications of Smaller-, Medium-, and Larger-Programs for institutions operating under each type of governance structure. For public, private not-for-profit, and for-profit MCUs, those institutions granting between 50 and 99 master’s degree annually are classified Smaller-Programs, those granting between 100 and 199 master’s degrees annually as Medium-Programs, and those institutions granting 200 or more master’s degrees annually are classified as Larger-Programs MCUs. Among the 266 public MCUs, 31 or 12% are classified as Smaller-Programs, 69 or 26% are classified as Medium-Programs, and 166 are classified as Larger-Programs. Carnegie also used the subcategories of Smaller-, Medium-, and Larger-Programs to classify private not-for-profit

and for-profit MCUs. Among the 345 private not-for-profit MCUs, 81 or 23% are classified as Smaller-Programs, 105 or 30% are classified as Medium-Programs, and 159 or 46% are classified as Larger-Programs. Among the 45 private for-profit MCUs, 13 or 29% are classified as Smaller-Programs, 14 or 31% are classified as Medium-Programs, and 18 or 40% are classified as Larger Programs.

We believe subdividing public sector MCUs using a geographically based classification scheme similar to Carnegie's Associate's Colleges can produce a far more useful tool for research, policy, and programs than a scheme based upon number of master's degrees awarded. We believe place matters. This fact was recognized within Carnegie's 2005 Basic Classification, which for the first time provided geographic sub-classifications of the Associate's College sector by rural-, suburban-, and urban-serving institutions. This makes good sense for the public MCUs sector as well, particularly to measure college degree success, which likely will emphasize expanding transfer across the Associate's College and MCU sectors. We now turn attention to analyzing enrollments and student financial aid using the geographically-based 2005 Carnegie Basic Classification of Associate's Colleges and the proposed MCU classification.

Geographically Classifying Master's Colleges & Universities

To classify public Associate's Colleges, Carnegie used population data collected from the 2000 United States Decennial Census through its American Fact Finder system, with population data accessed for each city in which the institutions report their physical address, found at: http://factfinder.census.gov/servlet/QTGeoAddressServlet?_ts=252946671736 (Hardy, 2005). Public Associate's Colleges reporting a physical address within the confines of a PMSA or MSA, with the city's name included in the title of the PMSA or MSA, and with a total population of 500,000 people or more were coded as "urban-serving". Associate's Colleges with

physical addresses within PMSAs or MSAs with a total population of 500,000 people or more, but not included in the name of the PMSA or MSA, were coded as “suburban-serving,” and those institutions with a physical address outside of any PMSA or MSA, or located within the parameters of a PMSA or MSA with fewer than 500,000 people were coded as “rural-serving.”

Table 2 presents institutions that reported to IPEDS data for annual unduplicated headcount enrollments and average enrollments for both 2000-01 and 2006-07 academic years by number and percentages, deploying the exact same methodology by which Katsinas, Hardy, and Lacey (2005) classified Associate's Colleges for the Carnegie Foundation (February, 2006). The first three columns under “institutions” in Table 2 present the Associate's Colleges within the seven geographic sub-classifications within the Carnegie 2005 Basic Classification universe. A total of 973 discrete Associate's Colleges submitted institutional data to NCES in both 2000-01 and 2006-07 (not presented here are the four “other” types of public Associate's Colleges (hereafter, ACs) in this, the largest sector within the Carnegie universe). Of these 973 institutions, 584 or 60% are rural, 210 or 22% are suburban, and 179 or 18% are urban.

By major geographic type, the 265¹ public MCUs include 163 rural, 56 suburban, and 46 urban institutions. This percentage distribution is quite similar to the public Associate's Colleges that are classified geographically in Table 2 (see third column), with 61% classified as rural, 21% as suburban, and 17% as urban. Table 2 shows that by sub-classification, the 163 rural public MCUs include 26 or 10% Rural-Small, 46 or 17% Rural-Medium, and 91 or 34% Rural-Large institutions. The suburban-serving sector includes 56 institutions, of which 15 or 6% are Suburban-Small, and 41 or 15% are Suburban-Large. The urban-serving sector includes 46 institutions, of which 13 or 5% are Urban-Small, and 33 or 12% are Urban Large. This produces

¹ The U.S. Naval Post-Graduate Academy is listed in the Carnegie universe as a public MCU. This institution was removed from the data analysis in this paper because this institution has no undergraduate students; therefore, all data from this point forward looks at only the 265 MCUs with undergraduate enrollments.

a classification scheme for the public MCUs with 7 sub-classifications, a number exactly equal to the Carnegie Basic Classification of Associate's Colleges, which also includes 7 geographic classifications.

INSERT TABLE 2 ABOUT HERE

The next five columns of Table 2, under the heading of "Annual Unduplicated Headcount Enrollment," shows the dramatic enrollment surge of nearly 3 million students across all types of public two- and four-year access institutions from 2000-01 to 2006-07. In just seven years, ACs served an additional 2,306,374 students and at MCUs served an additional 690,599 students, increases of 31 and 38 percent, respectively. All types of rural, suburban, and urban ACs and MCUs saw substantial growth, with rural institutions seeing the greatest growth both numerically and on a percentage basis. We also note that the rural sector was growing fastest across both access sectors, with increases of over 1 million students at ACs and nearly 400,000 at MCUs, increases of 43 and 45 percent, respectively.

We attach great significance to the final four columns of Table 2, which show the average enrollments by sub-classification in 2000-01 and 2006-07, as well as the numerical and percentage change within each sector. It is again very clear that each and every sector is witnessing substantial enrollment growth in the current boom. By numbers within the ACs, Urban Single Campus and Suburban Multi-Campus institutions saw the largest average enrollment growth, of 7,021 and 3,589 students, respectively; within MCUs the top three sub-classifications saw virtually the same numerical enrollment growth, with Suburban Large growing by an average of 3,896 students, Rural Large growing by an average of 3,261 students, and Urban Large growing by an average of 3,218 students. In the real world of higher education administration, leaders are trying to create positive learning environments to produce successful

outcomes, as measured by degrees awarded. Table 2 shows that all access institutions are seeing significant enrollment growth; within many ACs that growth is quite often akin to establishing a new campus, and within MCUs it is akin to establishing a new college or major academic unit.

Thus, the geographic profile of the nation's 265 publicly-controlled MCUs—of which 61% are rural-serving, 21% suburban-serving, and 17% urban-serving—by percentage closely matches the institutional distribution within the 2005 Carnegie's Basic classification of Associate's Colleges. The enrollment distribution is somewhat different, however; of the 2,507,879 undergraduate students enrolled at the 265 public Master's institutions in academic year 2006-07, 1,279,177 or 51% were enrolled at the 163 rural-serving institution, 633,165 or 25% at the 56 suburban institutions, and 595,537 or 24% at the 46 urban-serving institutions.

Applying the New Geographic Classification of Public MCUs

Table 3 presents unduplicated annual headcount enrollments by race and ethnicity for both access sectors for the 2006-07 academic year, expressed in numbers and percentages. Table 4 shows how the different racial and ethnic groups are situated on a percentage basis within each public AC and MCU subclass. Table 3 shows that of the 9.7 million students at ACs, 5.5 million are White, 1.3 million are Black, 1.4 million are Hispanic, 619,886 are Asian or Pacific Islander, 98,421 are American Indian or Native Alaskan, and 644,570 are “race unknown” and an additional 126,035 are non-resident aliens. Within the 2.5 million students enrolled at public MCUs, more than 1.5 million are White, a third of a million are Black, 264,802 are Hispanic, 137,508 are Asian and Pacific Islander, 26,401 are American Indian or Alaskan Native, and 149,547 are “race unknown” and an additional 59,696 are non-resident aliens. By geographic sub-classification and specific racial and ethnic category, 30 and 44 percent of all Black students are enrolled at rural ACs and MCUs, respectively; 45 and 42 percent of all Hispanic students are

enrolled at urban ACs and MCUs, respectively; 47 and 32 percent of all Asians/Pacific Islander students are enrolled at suburban ACs and MCUs, respectively; and 49 and 40 percent of all American Indian/Alaskan Native students are enrolled at rural ACs and MCUs, respectively.

INSERT TABLE 3 ABOUT HERE

Table 4 presents annual unduplicated headcount enrollments for 2000-1 and 2006-7 by race and ethnicity, and shows the growing percentages of racial and ethnic minorities across all types of public access institutions. Table 4 also shows how similar the rough approximations of race and ethnicity are across the major rural, suburban, and urban major sub-classifications for public ACs and MCUs. At rural institutions, white enrollments in 2006-7 were 71% at both public ACs and public MCUs; Black enrollments in that same year were 11 and 12 percent, respectively, and Hispanics were 8 and 7 percent, respectively. At suburban institutions, white enrollments were 53 and 60 percent, respectively, at ACs and MCUs; Black enrollments were 11 and 13 percent, respectively; Hispanic enrollments were 16% at ACs and 10% at MCUs; and Asian/Pacific Islander enrollments were 10 and 7 percent, respectively. At urban institutions, white enrollments were 46 and 42 percent, respectively; Black enrollments were 17 and 18 percent, respectively; Hispanic enrollments were 19% at both ACs and MCUs, and Asian/Pacific Islander enrollments were 8 and 10 percent, respectively. Thus, in terms of enrollments by race and ethnicity, the urban ACs and urban MCUs categories by definition include many majority-minority institutions, as do some of the suburban ACs and MCUs. The striking similarities as measured by the percentage distribution of enrollments by race and ethnicity found at ACs and MCUs further justifies a classification of the public MCUs based upon geography.

INSERT TABLE 4 ABOUT HERE

Table 5 shows the number of first-time/full-time degree- and certificate-seeking students receiving student financial aid in the IPEDS Student Financial Aid Cohort Study who receive student financial aid by type of aid, and who incur student loan debt for both public Associate's Colleges and public Master's Colleges and Universities in the 2006-7 academic year. The first two columns of Table 5 show the number of students in the cohort by AC and MCU type, and a slightly more even distribution across rural, suburban, and urban institutions for the ACs than for the MCUs. The next three columns, under the heading of "Students in the IPEDS Student Aid Cohort who receive... ANY Financial Aid" shows the numbers and percentages of students in the cohort who receive any financial aid to access college. By numbers, and by percentages in the cohort, 62% of all students in the cohort at ACs, and 76% at MCUs use student financial aid to access college. By institutional type, more rural students receive some form of financial aid for both the public AC and MCU sectors (71% and 78%, respectively than at corresponding suburban and urban institutions (49% and 76%, and 60% and 73%, respectively).

Table 5 also shows that large numbers and percentages of students at public access institutions rely on student financial aid from the federal government, the state and local governments, and institutional sources to access higher education, and that, sadly, substantial percentages are incurring student loan debt. The percentages of students receiving any federal aid are generally between 60 and 70 percent at ACs, and between 35 and 55 percent at the MCUs. The state/local aid percentages are roughly similar, while there are significantly more students receiving institutional aid at public MCUs than at the ACs. We note here the strikingly higher percentages of students incurring student loan debt to complete their degrees at public MCUs, the clear result of the cost shifting experts such as Delta Cost Project (2009) have cited,

as public access universities are forced to raise tuition to make up for sharp cuts in state tax appropriations for their operating budgets.

Table 6 shows the changes by type of access institution comparing the 2000-1 and 2006-7 academic years, again through use of the IPEDS Student Financial Aid Cohort Study Survey. Here four important observations can be made: First, under the heading of “Students Receiving ANY Financial Aid,” we see strikingly similar percentages by geographic type of students who received financial aid from any source in 2006-7. At Associate’s Colleges, the percentages of students receiving any type of financial aid by geographic rural/suburban/urban split were 52, 24, and 25 percent, respectively; at Master’s Colleges & Universities these percentages were 58, 23, and 19 percent, respectively. Second, under the column headed “Students Receiving ANY Financial Aid,” we note that the numbers of students in the IPEDS Student Financial Aid Survey rose between 2000-1 and 2006-7 for each and every type of two- and four-year public access institution within each Carnegie sub-classification. Among Associate’s Colleges, the percentage increase from 2000-01 to 2006-7 of financially aided students among the ACs ranged from a low of 10% at Rural Small to a high of 59% at Suburban Multi-Campus and 49% at Suburban Single Campus and Urban Multi-Campus institutions. Among Master’s Colleges and Universities, the percentage increase from 2000-1 to 2006-7 ranged from a low of 3% at the Urban and Suburban Small institutions to a high of 39% at Rural Large institutions.

By type of aid, over the seven year period, significantly more students in the cohort received federal student aid, most of which came in the form of Pell Grants and Supplemental Education Opportunity Grants (SEOGs). Of the students attending ACs, not surprisingly, in 2006-7, 229,399 of the 376,448 students in the cohort received some type of federal aid (roughly two of three), while at the public MCUs, 103,247 of the 253,363 students in the cohort received

some type of federal aid (about 4 in 10). There can be no question of the importance of the Pell Grant program as a key in providing access to first-time-in-college-students to access ACs and MCUs.

Table 6 shows roughly similar percentage increases in students receiving state and local government funded aid across ACs and MCUs, but strikingly different patterns of institutional aid and student loan debt incurred. We note here that while state/local scholarships are of clear importance to the students who receive them, when measured by total dollars, local government aid is small, and state aid is dwarfed by federal aid (we also note that these data were for the 2006-7 year, before the state of the current recession, when states like Illinois made deep cuts in their state-funded student financial aid program to cope with large state revenue shortfalls). By AC type, the level of institutional aid actually declined at Urban Single Campus ACs, and was flat at Rural Large institutions.

INSERT TABLE 6 ABOUT HERE

The most important change over these seven years can be observed in the three columns on the right of Table 6 with the heading “Students Incurring Loan Debt.” We note here that under IPEDS definitions, this is actually called “loans awarded.” We choose deliberately not to use that terminology in this table because student loans are incurred debt, they are not awarded, and presumably, the banks or the federal government would like to be paid back. Thus, significant differences exist across all three geographical types with respect to student direct grant aid (Pell and SEOG) and loan indebtedness. Three-fourths (76%) of first-time, full-time degree seeking students received any financial aid, and 31% received Pell, SEOG, or both, while just under half (46%) incurred student loan debt.

Discussion

The purpose of this paper was to propose and test a geographically-based classification scheme for public Master's Colleges and Universities (MCUs) as part of the 2005 Basic Classification published by the Carnegie Foundation for the Advancement of Teaching. The 2005 Carnegie Basic Classification for the first time provided 15 sub-classifications for the largest single institutional category, Associate's Colleges, of which 7 used a geographic basis to classify. Geographically classifying public two-year colleges was justified by the fact that states typically assign, through written statute or via regulatory authority, geographic service delivery areas to their community colleges. Public MCUs, most of which belong to the American Association of State Colleges and Universities, also share a strong commitment to stewardship of place. Given the national policy goal of dramatically increasing the numbers of adults in this country with college degrees, the need to develop policy tools that allow for geographic analysis of ties between two- and four-year institutions could not be more needed, or timely.

This study proposed and tested a classification of the public MCUs consistent with the Carnegie Basic Classification of Associate's Colleges. Public MCUs were reclassified as rural-, suburban-, and urban-serving, and then classified by size. The existing 2005 Carnegie Basic Classification had previously grouped the MCUs by size, but not by geography. When analyzed, it was found that the cell sizes for the Small and Medium sized Suburban and Urban public MCUs were so small that it made sense to combine them together, as was done in Tables 2-6. Thus, under our scheme the Rural-, Suburban-, and Urban-Large public MCUs award 200 or more master's degrees annually; Suburban-Small and Urban-Small award between 50 and 199 master's degrees annually; Rural-Small MCUs award between 50 and 99 master's degrees annually, and Rural-Medium MCUs award between 100 and 199 master's degrees annually.

There are the same number of cells (7 each) with similar names across both the Associate's Colleges and Master's Colleges and Universities sectors, as Tables 2-6 show.

When various NCES/IPEDS data were analyzed for enrollments from 2000-1 to 2006-7, enrollments by race and ethnicity, and student financial aid, a great deal of similarities across the public AC and MCU sectors were revealed, strongly suggesting the efficacy of a geographically based classification tool for public MCUs, the sector that Pat Callan correctly terms "the most understudied in American higher education." Both are growing—fast. Both serve substantial numbers of racial and ethnic minorities, and large numbers of first-time-in-college students. And both serve large numbers of students who need financial aid from federal, state and local, and institutional sources, and— we sadly report—also incur significant numbers of student loans.

We close by repeating the admonishment made to one of the authors (Katsinas) by the late Clark Kerr as he completed his initial work on two-year classifications. Kerr noted that it was beyond the ability of the Carnegie Commission staff in the late 1960s and early 1970s to develop a classification scheme for the two-year sector, but that it was needed "to improve the precision of research" (personal communication, 1994). The authors hope their classification scheme will improve the precision of research on public MCUs, and their critically important role in transfer, which we posit is a regionalized place-based activity between Associate's Colleges and public Master's Colleges and Universities. A baseline of similar quantitative institutional definitions across these two types can allow for much greater precision in qualitative research on good transfer and articulation policies. To echo the late Barbara K. Townsend's encouragement of Katsinas, Lacey, and Hardy with their efforts to classify two-year colleges, Master's Colleges and Universities deserve to be classified through a geographic frame that honors their strong commitment to place, a commitment shared across both access sectors.

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Table 1

The Carnegie Classification System of Institutions of Higher Education by Major Class and Subclasses, 2000 and 2005

2000 <i>Major Class</i> <i>Subclass</i>	2005 <i>Major Class</i> <i>Subclass</i>
<i>Associate's Colleges</i>	<i>Associate's Colleges</i>
	Associate's-Public Rural-serving Small
	Associate's-Public Rural-serving Medium
	Associate's Public Rural-serving Large
	Associate's Public Suburban-serving Single Campus
	Associate's Public Suburban-serving Multicampus
	Associate's Public Urban-serving Single Campus
	Associate's Public Urban-serving Multicampus
	Associate's- Public Special Use
	Associate's Private Not-for-profit
	Associate's Private For-profit
	Associate's Public 2-year Colleges under Universities
	Associate's Public 4-year, Primarily Associate's
	Associate's Private Not-for-profit 4-year, Primarily Associate's
	Associate's Private For-profit 4-year, Primarily Associate's
<i>Doctoral-Granting Institutions</i>	<i>Doctorate-Granting Universities</i>
Doctoral/Research Universities-Extensive	Research Universities (very high research activity)
Doctoral/Research Universities-Intensive	Research Universities (high research activity)
	Doctoral/Research Universities
<i>Master's Colleges & Universities</i>	<i>Master's Colleges and Universities</i>
Master's Colleges & Universities I	Master's Colleges and Universities (larger programs)
Master's Colleges & Universities II	Master's Colleges and Universities (medium programs)
	Master's Colleges and Universities (smaller programs)
<i>Baccalaureate Colleges</i>	<i>Baccalaureate Colleges</i>
Baccalaureate Colleges- Liberal Arts	Baccalaureate Colleges- Arts & Sciences
Baccalaureate Colleges- General	Baccalaureate Colleges- Diverse Fields
Baccalaureate/Associate's Colleges	Baccalaureate Colleges- Associate's Colleges
<i>Specialized Institutions</i>	<i>Special Focus Institutions</i>
Theological Schools	Theological seminaries, Bible colleges, and other faith-related Institutions
Medical Schools & Medical Centers	Medical Schools and medical centers
Other Separate Health	Other health profession schools
Profession Schools	Schools of engineering
Schools of Engineering & Technology	Other technology-related schools
Schools of Business & Management	Schools of business and Management
Schools of Art, Music & Design	Schools of Art, Music, and Design
Schools of Law	Schools of Law
Teachers' Colleges	Other Special-Focus Institutions
Other Specialized Institutions	
<i>Tribal Colleges & Universities</i>	<i>Tribal Colleges</i>

Table 2											
Enrollment at Associate's Colleges in the 2005 Carnegie Basic Classification and Master's Colleges and Universities in the Proposed Classification, 2000-1 and 2006-7											
2005 Carnegie Basic Classification of Associate's Colleges	Institutions		Annual Unduplicated Headcount Enrollment					Average enrollment			
			2000-1	2006-7	No.	%	Change, 2000-1 to 2006-7	2000-1	2006-7	No.	Change, 2000-1 to 2006-7
	No.	%					% change within subclass				% change within subclass
Rural Small	136	14	140,706	198,485	57,779	41	3	1,035	1,459	425	41
Rural Medium	305	31	890,587	1,431,953	541,366	61	23	2,920	4,695	1,775	61
Rural Large	143	15	1,361,224	1,784,176	422,952	31	18	9,519	12,477	2,958	31
Total Rural	584	60	2,392,517	3,414,614	1,022,097	43	44	4,097	5,847	1,750	43
Suburban Single Campus	110	11	1,032,566	1,350,457	317,891	31	14	9,387	12,277	2,890	31
Suburban Multi-Campus	100	10	1,333,976	1,692,873	358,897	27	16	13,340	16,929	3,589	27
Total Suburban	210	22	2,366,542	3,043,330	676,788	29	29	11,269	14,492	3,223	29
Urban Single Campus	32	3	203,254	427,926	224,672	111	10	6,352	13,373	7,021	111
Urban Multi-Campus	147	15	2,396,597	2,779,414	382,817	16	17	16,303	18,908	2,604	16
Total Urban	179	18	2,599,851	3,207,340	607,489	23	26	14,524	17,918	3,394	23
Total	973	100	7,358,910	9,665,284	2,306,374	31	100	7,563	9,933	2,370	31
Public MCUs *											
Rural Small	26	10	98,731	127,691	28,960	29	4	3,797	4,911	1,114	29
Rural Medium	46	17	208,844	277,729	68,885	33	10	4,540	6,038	1,498	33
Rural Large	91	34	576,986	873,757	296,771	51	43	6,341	9,602	3,261	51
Rural Total	163	61	884,561	1,279,177	394,616	45	57	5,427	7,848	2,421	45
Suburban Small	15	6	74,445	87,047	12,602	17	2	4,963	5,803	840	17
Suburban Large	41	15	386,395	546,118	159,723	41	23	9,424	13,320	3,896	41
Suburban Total	56	21	460,840	633,165	172,325	37	25	8,229	11,307	3,077	37
Urban Small	13	5	103,294	120,746	17,452	17	3	7,946	9,288	1,342	17
Urban Large	33	12	368,585	474,791	106,206	29	15	11,169	14,388	3,218	29
Urban Total	46	17	471,879	595,537	123,658	26	18	10,258	12,946	2,688	26
R, S, & U Total	265	100	1,817,280	2,507,879	690,599	38	100	6,858	9,464	2,606	38
Data Source: NCES/IPEDS 2008 Collection Year. Note: * Public MCU's are classified using the proposed geographic classification (Kinhead, 2009).											

Table 3

Annual Unduplicated Headcount Student Enrollment for Public Access Institutions by Race and Ethnicity, 2006-07

Public Associate's Colleges	Total		White		Black		Hispanic		Asian/ Pacific Islander		American Indian/ Alaskan Native		Race Unknown	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Rural Small	198,485	2	130,713	2	39,343	3	8,914	1	8,687	1	3,576	4	6,668
Rural Medium	1,431,953	15	1,071,764	19	169,377	13	80,013	6	21,511	3	21,442	22	62,269	10
Rural Large	1,784,176	18	1,231,306	22	163,149	13	193,995	14	48,740	8	23,218	24	110,643	17
Rural Total	3,414,614	35	2,433,783	44	371,869	30	282,922	20	78,938	13	48,236	49	179,580	28
Suburban Single	1,350,457	14	719,313	13	157,802	13	243,950	18	109,868	18	8,047	8	93,855	15
Suburban Multi-	1,692,873	18	899,666	16	179,592	14	242,278	17	182,066	29	11,417	12	145,038	23
Suburban Total	3,043,330	31	1,618,979	29	337,394	27	486,228	35	291,934	47	19,464	20	238,893	37
Urban Single	427,926	4	249,653	5	88,167	7	43,242	3	14,508	2	3,695	4	24,903	4
Urban Multi-	2,779,414	29	1,222,965	22	460,450	37	580,720	42	234,506	38	27,026	27	201,194	31
Urban Total	3,207,340	33	1,472,618	27	548,617	44	623,962	45	249,014	40	30,721	31	226,097	35
Total	9,665,284	100	5,525,380	100	1,257,880	100	1,393,112	100	619,886	100	98,421	100	644,570	100
Public MCUs *														
Rural Small	127,691	5	82,891	5	27,382	8	4,013	2	2,054	1	2,502	9	6,474	4
Rural Medium	277,729	11	178,494	12	32,913	10	34,068	13	8,427	6	5,191	20	13,043	9
Rural Large	873,757	35	647,048	42	87,710	26	49,600	19	22,274	16	11,980	45	40,365	27
Rural Total	1,279,177	51	908,433	59	148,005	44	87,681	33	32,755	24	19,673	75	59,882	40
Suburban Small	87,047	3	57,322	4	11,055	3	6,258	2	3,485	3	435	2	6,039	4
Suburban Large	546,118	22	319,477	21	69,569	21	59,936	23	40,740	30	3,146	12	37,684	25
Suburban Total	633,165	25	376,799	25	80,624	24	66,194	25	44,225	32	3,581	14	43,723	29
Urban Small	120,746	5	60,643	4	32,992	10	5,136	2	3,375	2	710	3	16,316	11
Urban Large	474,791	19	190,589	12	71,840	22	105,791	40	57,153	42	2,437	9	29,626	20
Urban Total	595,537	24	251,232	16	104,832	31	110,927	42	60,528	44	3,147	12	45,942	31
R, S, & U Total	2,507,879	100	1,536,464	100	333,461	100	264,802	100	137,508	100	26,401	100	149,547	100

Data Source: NCES/IPEDS 2008 Collection Year. Notes: *This uses proposed geographic classification of public MCUs developed by Kinkead (2009).

Table 4																	
Percentage Unduplicated Student Headcount Enrollment by Race and Ethnicity, and by 2005 Carnegie Basic Classification of Associate's Colleges and by Proposed Geographic Classification of Public Master's Colleges and Universities, 2000-1 and 2006-7																	
2005 Carnegie Basic Classification of Associate's Colleges	Total	White		Black		Hispanic		Asian/Pacific Islander		American Indian/ Alaskan Native		Race Unknown		Non-Resident Alien			
		2000-1	2006-7	2000-1	2006-7	2000-1	2006-7	2000-1	2006-7	2000-1	2006-7	2000-1	2006-7	2000-1	2006-7		
		Rural Small	100%	70%	66%	20%	20%	3%	4%	2%	4%	1%	2%	4%	3%	0%	0%
Rural Medium	100%	78%	75%	11%	12%	5%	6%	1%	2%	1%	1%	3%	4%	0%	0%		
Rural Large	100%	72%	69%	7%	9%	10%	11%	3%	3%	2%	1%	5%	6%	1%	1%		
Rural Total	100%	74%	71%	9%	11%	8%	8%	2%	2%	1%	1%	5%	5%	1%	1%		
Suburban Single Campus	100%	54%	53%	10%	12%	18%	18%	9%	8%	1%	1%	7%	7%	1%	1%		
Suburban Multi-Campus	100%	55%	53%	8%	11%	13%	14%	13%	11%	1%	1%	8%	9%	2%	2%		
Suburban Total	100%	54%	53%	9%	11%	15%	16%	11%	10%	1%	1%	8%	8%	2%	2%		
Urban Single Campus	100%	60%	58%	16%	21%	11%	10%	3%	3%	2%	1%	6%	6%	1%	1%		
Urban Multi-Campus	100%	45%	44%	16%	17%	21%	21%	9%	8%	1%	1%	6%	7%	2%	2%		
Urban Total	100%	47%	46%	16%	17%	20%	19%	9%	8%	1%	1%	6%	7%	2%	2%		
Total	100%	58%	57%	11%	13%	14%	14%	7%	6%	1%	1%	6%	7%	1%	1%		
Public MCUs *																	
Rural Small	100%	65%	65%	16%	21%	3%	3%	1%	2%	2%	2%	11%	5%	2%	2%		
Rural Medium	100%	70%	64%	11%	12%	10%	12%	3%	3%	1%	2%	4%	5%	1%	2%		
Rural Large	100%	79%	74%	8%	10%	4%	6%	2%	3%	1%	1%	5%	5%	2%	2%		
Rural Total	100%	75%	71%	10%	12%	5%	7%	2%	3%	1%	2%	5%	5%	2%	2%		
Suburban Small	100%	72%	66%	11%	13%	6%	7%	3%	4%	1%	0%	4%	7%	2%	3%		
Suburban Large	100%	63%	58%	11%	13%	10%	11%	8%	7%	0%	1%	6%	7%	2%	3%		
Suburban Total	100%	65%	60%	11%	13%	9%	10%	7%	7%	0%	1%	6%	7%	2%	3%		
Urban Small	100%	54%	50%	30%	27%	3%	4%	2%	3%	0%	1%	8%	14%	3%	1%		
Urban Large	100%	41%	40%	17%	15%	19%	22%	13%	12%	1%	1%	6%	6%	3%	4%		
Urban Total	100%	44%	42%	20%	18%	15%	19%	11%	10%	1%	1%	7%	8%	3%	3%		
R, S, & U Total	100%	64%	61%	13%	13%	9%	11%	6%	5%	1%	1%	6%	6%	2%	2%		

Data Source: NCES/IPEDS 2008 Collection Year. Note: * Public MCU's are classified using the proposed geographic classification (Kinhead, 2009).

Table 5												
<i>Financial Aid Awards to and Loans Incurred According to the IPEDS Student Financial Aid Cohort Study Survey of Students at Public Associate's Colleges and Master's Colleges & Universities, 2006-7</i>												
Public Associate's Colleges	Students in the Cohort		Students in the IPEDS Student Aid Cohort who receive...								Students in Cohort Who Incur Loan Debt	
			ANY Financial Aid		Federal Aid (Pell+SEOG)		State/Local Aid		Institutional Aid			
	Number	by type	Number	% in Cohort	%	Number	%	Number	%	Number	%	Number
Rural Small	24,798	4	20,755	84	100	13,700	66	7,931	38	4,549	22	6,704
Rural Medium	135,591	22	101,369	75	100	61,135	60	47,470	47	27,199	27	36,658
Rural Large	110,221	18	69,939	63	100	40,420	58	33,917	48	15,245	22	24,374
Rural Total	270,610	44	192,063	71	100	115,255	60	89,318	47	46,993	24	67,736
Suburban Single	90,785	15	47,599	52	100	26,542	56	30,390	64	5,810	12	14,660
Suburban Multi-	91,522	15	41,854	46	100	23,551	56	24,320	58	6,182	15	10,932
Suburban Total	182,307	30	89,453	49	100	50,093	56	54,710	61	11,992	13	25,592
Urban Single	29,672	5	19,496	66	100	12,410	64	10,841	56	2,249	12	7,296
Urban Multi-	129,386	21	75,436	58	100	51,641	68	44,435	59	8,538	11	16,445
Urban Total	159,058	26	94,932	60	100	64,051	67	55,276	58	10,787	11	23,741
Total	611,975	100	376,448	62	100	229,399	61	199,304	53	69,772	19	117,069
Public MCUs *												
Rural Small	18,214	5	15,479	85	100	6,917	45	6,739	44	6,745	44	10,481
Rural Medium	41,088	12	33,538	82	100	13,347	40	14,608	44	15,205	45	20,190
Rural Large	130,263	39	98,453	76	100	35,450	36	46,201	47	35,883	36	64,080
Rural Total	189,565	57	147,470	78	100	55,714	38	67,548	46	57,833	39	94,751
Suburban Small	11,096	3	8,024	72	100	3,037	38	3,072	38	2,146	27	5,984
Suburban Large	64,320	19	49,032	76	100	18,367	37	30,001	61	17,093	35	26,586
Suburban Total	75,416	23	57,056	76	100	21,404	38	33,073	58	19,239	34	32,570
Urban Small	10,566	3	8,124	77	100	3,882	48	3,705	46	2,614	32	5,149
Urban Large	56,570	17	40,713	72	100	22,257	55	24,027	59	15,084	37	18,520
Urban Total	67,136	20	48,837	73	100	26,139	54	27,732	57	17,698	36	23,669
R, S, & U Total	332,117	100	253,363	76	100	103,257	41	128,353	51	94,770	37	150,990
Source: IPEDS Student Financial Aid Cohort Study, 2008 Year. Notes: *proposed geographic classification developed by Kinkead (2009).												

Table 6																				
<i>Financial Aid Awards to and Loans Incurred by First-Time/Full-Time Degree- and Certificate Seeking Undergraduate Students at Public Associate's Colleges and Master's Colleges & Universities in the 2005 Carnegie Basic Classification, 2000-1 and 2006-2007</i>																				
Associate's Colleges	Students Receiving <u>ANY</u> Financial Aid			Students Receiving Federal Aid			Students Receiving State/Local Aid			Students Receiving Institution Aid			Students Incurring Loan Debt							
	2000-1		2006-7		%	ch	2000-1		2006-7		%	ch	2000-1		2006-7		%	ch		
	2000-1	No	2006-7	%	ch	2000-1	2006-7	ch	2000-1	2006-7	%	ch	2000-1	2006-7	ch	2000-1	2006-7	%	ch	
Rural Small	18,844	20,755	6	10			12,432	13,700	10	7,162	7,931	11		3,567	4,549	28	6,082	6,704	10	
Rural Medium	78,058	101,369	27	30			46,992	61,135	30	35,117	47,470	35		22,107	27,199	23	22,540	36,658	63	
Rural Large	57,028	69,939	19	23			33,882	40,420	19	26,513	33,917	28		15,248	15,245	0	17,700	24,374	38	
Rural Total	153,930	192,063	52	25			93,306	115,255	24	68,792	89,318	30		40,922	46,993	15	46,322	67,736	46	
Suburban Single	31,918	47,599	13	49			19,404	26,542	37	20,059	30,390	52		4,056	5,810	43	9,040	14,660	62	
Suburban Multi-	26,370	41,854	11	59			16,537	23,551	42	15,594	24,320	56		4,383	6,182	41	4,901	10,932	123	
Suburban Total	58,288	89,453	24	53			35,941	50,093	39	35,653	54,710	53		8,439	11,992	42	13,941	25,592	84	
Urban Single	16,441	19,496	5	19			10,488	12,410	18	8,872	10,841	22		2,417	2,249	-7	3,974	7,296	84	
Urban Multi-	50,609	75,436	20	49			35,691	51,641	45	29,730	44,435	49		6,812	8,538	25	7,891	16,445	108	
Urban Total	67,050	94,932	25	42			46,179	64,051	39	38,602	55,276	43		9,229	10,787	17	11,865	23,741	100	
Total	279,268	376,448	100	35			175,426	229,399	31	143,047	199,304	39		58,590	69,772	19	72,128	117,069	62	
Public MCUs *																				
Rural Small	11,536	15,479	6	34			5,928	6,917	17	5,551	6,739	21		4,371	6,745	54	8,700	10,481	20	
Rural Medium	29,444	33,538	13	14			12,137	13,347	10	11,510	14,608	27		12,761	15,205	19	16,361	20,190	23	
Rural Large	80,987	98,453	39	22			31,500	35,450	13	37,614	46,201	23		27,811	35,883	29	50,453	64,080	27	
Rural Total	121,967	147,470	58	21			49,565	55,714	12	54,675	67,548	24		44,943	57,833	29	75,514	94,751	25	
Suburban Small	6,203	8,024	3	29			2,373	3,037	28	3,500	3,072	-12		1,847	2,146	16	5,040	5,984	19	
Suburban Large	33,398	49,032	20	47			14,570	18,367	26	19,478	30,001	54		11,651	17,093	47	20,785	26,586	28	
Suburban Total	39,601	57,056	23	44			16,943	21,404	26	22,978	33,073	44		13,498	19,239	43	25,825	32,570	26	
Urban Small	6,821	8,124	3	19			3,173	3,882	22	2,377	3,705	56		2,089	2,614	25	3,354	5,149	54	
Urban Large	28,620	40,713	16	42			17,758	22,257	25	17,723	24,027	36		11,845	15,084	27	12,457	18,520	49	
Urban Total	35,441	48,837	19	38			20,931	26,139	25	20,100	27,732	38		13,934	17,698	27	15,811	23,669	50	
R, S, & U Total	197,009	253,363	100	29			87,439	103,257	18	97,753	128,353	31		72,375	94,770	31	117,150	150,990	29	

Data Source: NCES/IPEDS 2008 Collection Year. Notes: *This uses proposed geographic classification of public MCUs developed by Kinkead (2009).